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Gota Asano

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UNITED STATES PATENT AND TRADEMARK OFFICE

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BEFORE THE BOARD OF PATENT APPEALS  
AND INTERFERENCES

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*Ex parte* GOTA ASANO

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Appeal 2009-011335  
Application 10/715,744  
U.S. Patent Publication 2004/0142237  
Technology Center 1700

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Decided: April 14, 2010

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*Before:* FRED E. McKELVEY, *Senior Administrative Patent Judge*,  
and JAMESON LEE and MICHAEL P. TIERNEY, *Administrative Patent*  
*Judges.*

McKELVEY, *Senior Administrative Patent Judge.*

DECISION ON APPEAL

1           A. Statement of the case

2           The appeal is before us for a second time following completion of  
3 proceedings on a remand. *Ex parte Asano*, Appeal 2009-011335, slip op.  
4 (Sept. 2, 2009).

5           Matsushita Electric Industrial Co., Ltd. ("Matsushita"), the real party  
6 in interest, seeks review under 35 U.S.C. § 134(a) of a final rejection (mailed  
7 10 July 2007).

8           The application was filed on 18 November 2003.

9           Claims 1-8 are in the application.

1           Claims 1-8 stand rejected under 35 U.S.C. § 103 over (1) Yoshinaka,  
2   U.S. 6,596,434 (issued 22 July 2003) and (2) prior art described in the  
3   Matsushita specification. Yoshinaka is prior art under 35 U.S.C. § 102(e).  
4   Matsushita has not attempted to antedate Yoshinaka.

5           Claims 1-6 and 8 stand rejected under 35 U.S.C. § 103 over (1) Han,  
6   U.S. Patent 5,837,396 (issued 17 Nov. 1998) and (2) prior art described in  
7   the Matsushita specification. Han is prior art under 35 U.S.C. § 102(b).

8           We have jurisdiction under 35 U.S.C. § 134(a).

9           B. Background

10                               The Matsushita invention

11           Figs. 1a and 1b of the Matsushita application are reproduced below.

Fig. 1a

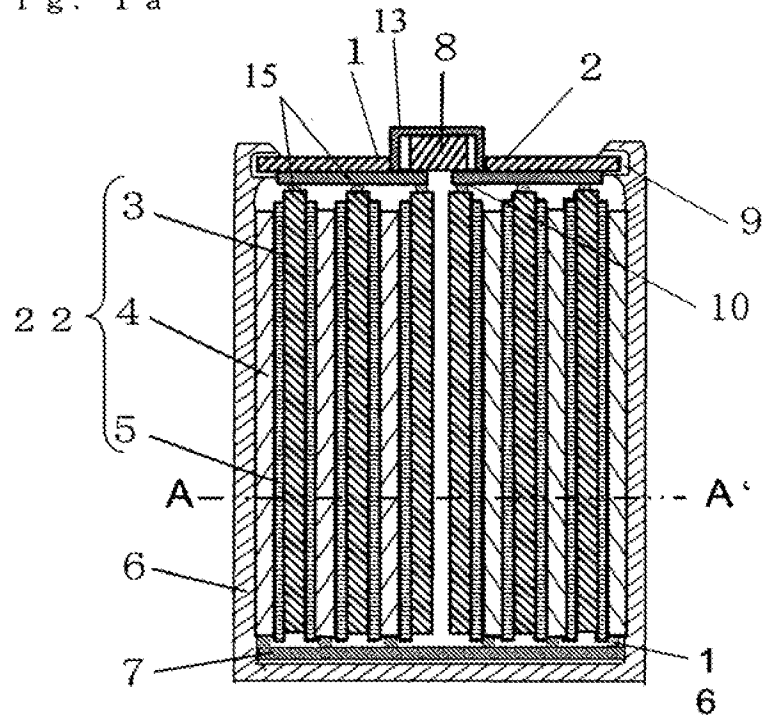
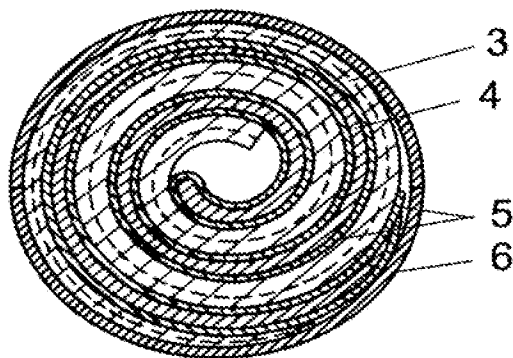


Fig. 1b



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Depicted are (1) in Fig. 1a, a longitudinal sectional view of a battery taken along a plane that passes through the center of a positive terminal and (2) in Fig. 1b, a cross-sectional view taken along line A-A' in Fig. 1a.

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With reference to Figs. 1a and 1b, claim 1 on appeal, reproduced from the claims appendix of the Appeal Brief, reads [drawing numbers and bracketed matter added]:

1                   An alkaline storage battery comprising:  
2                   a cylindrical metal case 6, said cylindrical metal case  
3                   having a bottom [no drawing number];  
4                   a positive plate 3 having a protrusion 15 projecting out of  
5                   said positive plate 3;  
6                   a negative plate 4 having a further protrusion 16  
7                   projecting out of said negative plate 4;  
8                   a separator 5 [, *e.g.*, polypropylene tape,] having  
9                   insulating properties;  
10                  an upper metal current collector 1 for collecting current  
11                  from a positive electrode side;  
12                  a bottom metal current collector 7 for collecting current  
13                  from a negative electrode side;  
14                  an electrolyte [specification, page 9:22-23 and  
15                  page 13:21 describing an alkaline electrolyte]; and  
16                  a sealing plate 2 made of a metal with a hole formed at  
17                  the center;  
18                  wherein:  
19                  an electrode group 22 is formed by spirally winding said  
20                  positive plate 3 and said negative plate 4 with said separator 5  
21                  interposed between them [, *i.e.*, plate 3 and plate 4—see  
22                  Fig. 1b], said protrusion 15 of said positive plate 3 and said  
23                  protrusion 16 of said negative plate 4 facing mutually opposite  
24                  directions [, *see* 15 top left and 16 bottom right,];

1                   said electrode group 22 is housed in said metal case 6  
2                   after joining [, *e.g.*, by welding,] said protrusion of said  
3                   negative plate 16 with said bottom metal current collector 7,  
4                   and said bottom metal current collector 7 and said bottom of  
5                   said metal case 6 are joined;

6                   said protrusion of said positive plate 15 is joined with the  
7                   bottom surface of said upper metal current collector 1;

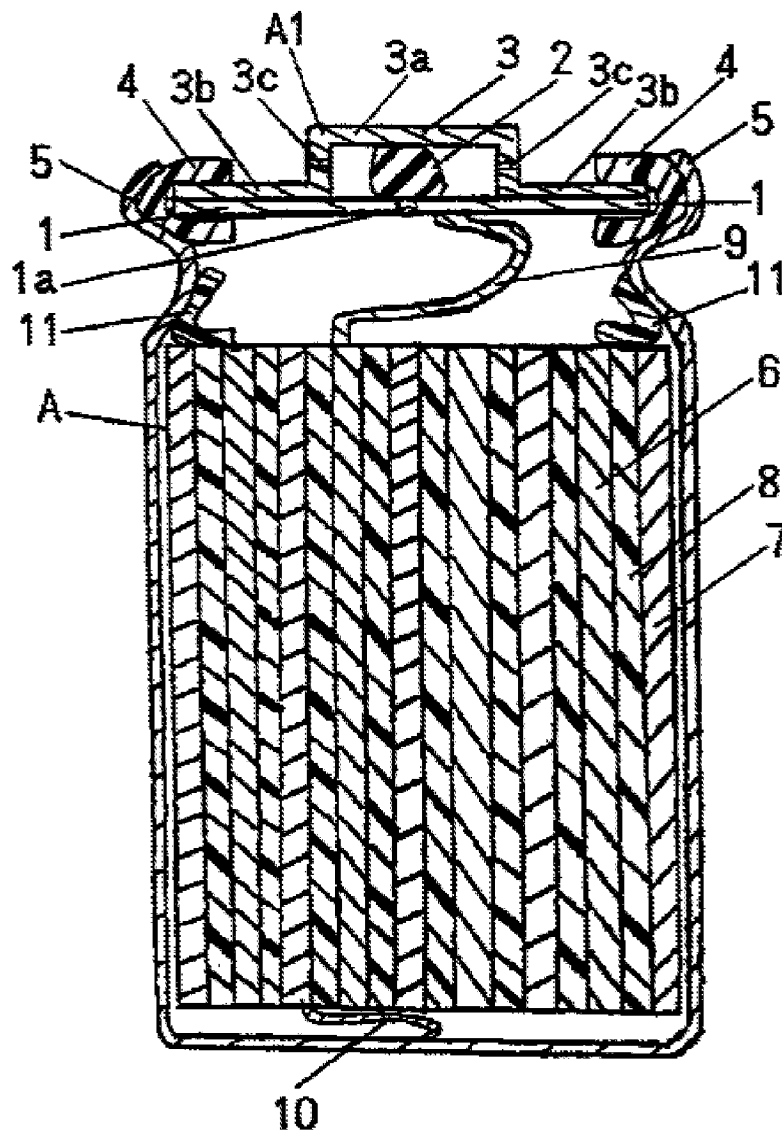
8                   a terminal 13 of said upper metal current collector 1 is  
9                   disposed through said hole in the center of said sealing plate 2,  
10                  said upper metal current collector 1 and said sealing plate 2 are  
11                  joined; and

12                  a periphery of said sealing plate 2 is hermetically sealed  
13                  with a gasket 9 at an upper opening of said metal case 6.

Yoshinaka

Fig. 1 of Yoshinaka is reproduced below.

**Fig. 1**



Depicted in Fig. 1 is a cross-sectional view of a Yoshinaka cylindrical alkaline storage battery.

Yoshinaka describes a disc-shaped filter 1 having a gas vent hole 1a. Col. 6:46. Also described is a cap-shaped terminal plate 3 having a cap 3a, a flange 3b and gas exhaust hole 3c in the terminal cap 3a. Col. 5:63-67. According to Yoshinaka, the surfaces of "flange 3b and filter 1 are pressed together, resulting in the establishment of a highly reliable electric current path." Col. 6:63-65.

Differences between Matsushita claim 1 and Yoshinaka

Three differences have been called to our attention.

Difference (1)

The Examiner found that Yoshinaka does not explicitly teach a terminal of the upper collector disposed through a hole in the center of a sealing plate. Examiner's Answer, page 3.

Difference (2)

The Examiner further found that Yoshinaka does not describe the sealing plate and terminal as two separate elements. Supplemental Answer, page 14.

The Examiner found that (1) Yoshinaka element 3b would indicate a sealing plate corresponding to the claimed sealing plate and (2) element 3a would indicate a terminal corresponding to the claimed invention. Supplemental Answer, pages 14-15.

Examiner's findings on differences (1) and (2)

To overcome differences (1) and (2), the Examiner stated the following (Examiner's Answer, pages 3-4 (emphasis added)):

The single sealing structure of Yoshinaka includes a sealing plate portion having an open central area and a terminal



1 attached to and protruding from the plate in an equivalent  
2 *manner* as claimed. However, the invention as a whole would  
3 have been obvious to one having ordinary skill in the art at the  
4 time the invention was made because one of skill would have  
5 found the two piece terminal and sealing plate as shown in  
6 Figure 1 of the [Matsushita] invention obvious in view of the  
7 single piece terminal and sealing plate as shown in Figures 1-5  
8 of Yoshinaka. The terminal of the upper collector is disposed  
9 through a hole in the center of a sealing . . . [plate 2—see  
10 Supplemental Answer, page 18:3-4]. The battery cap assembly  
11 of the claimed invention and the battery cap assembly of  
12 Yoshinaka are obvious variants and one of skill would  
13 reasonably expect them to function [in] the same [manner].

14 Difference (3)

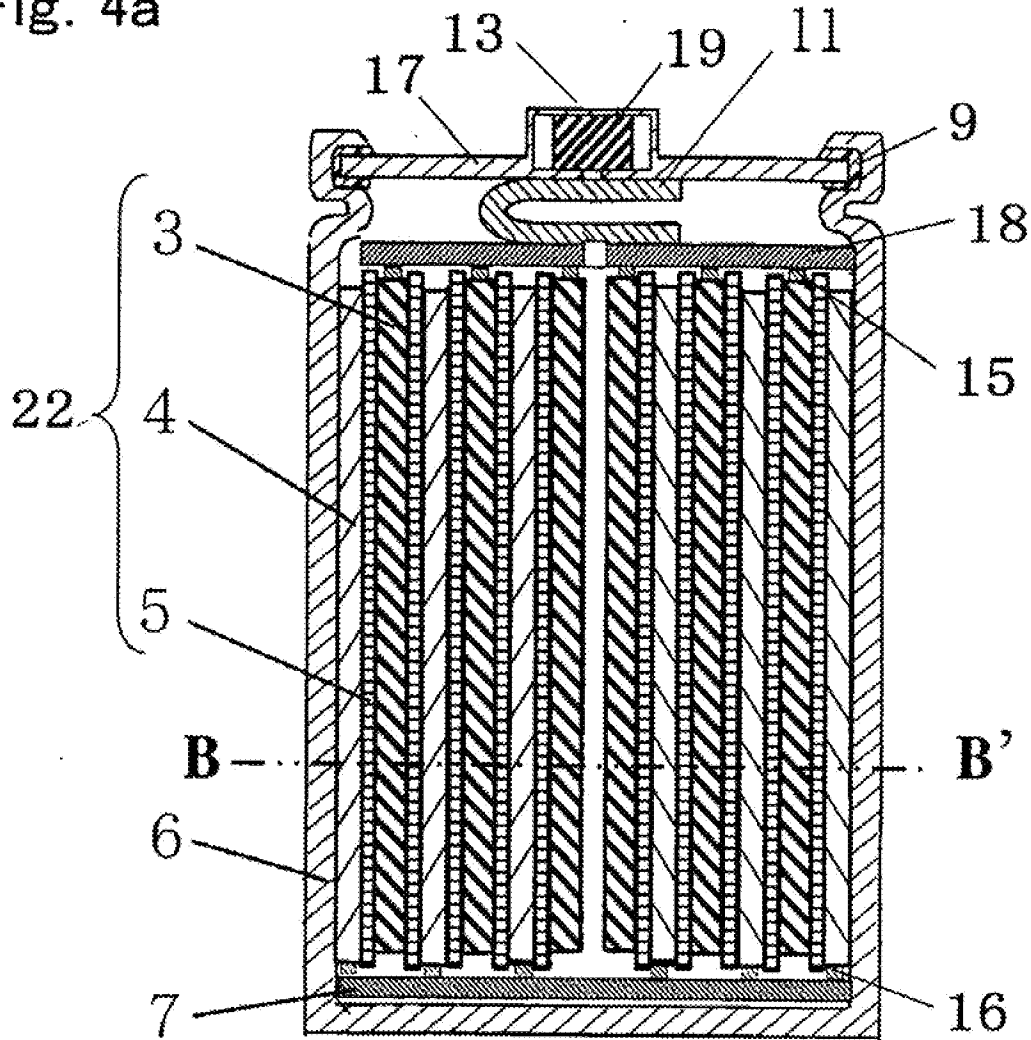
15 In addition to the hole in the center of the sealing plate limitation,  
16 Matsushita argues that Yoshinaka does not describe a protrusion (Matsushita  
17 Fig. 1, element 15), electrically connecting the positive plate (Matsushita  
18 Fig. 1, element 3) and the upper metal current collector (Matsushita Fig. 1,  
19 element 1). Appeal Brief, page 10, last two lines.

20 The protrusion is shown in the Matsushita Fig. 4 prior art  
21 "conventional alkaline storage battery" device. Specification, page 8:13.

22 Matsushita Fig. 4a is reproduced below.

# PRIOR ART

Fig. 4a



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Depicted in Fig. 4a is a longitudinal sectional view showing a conventional battery taken along a plane that passes the center of the positive terminal.

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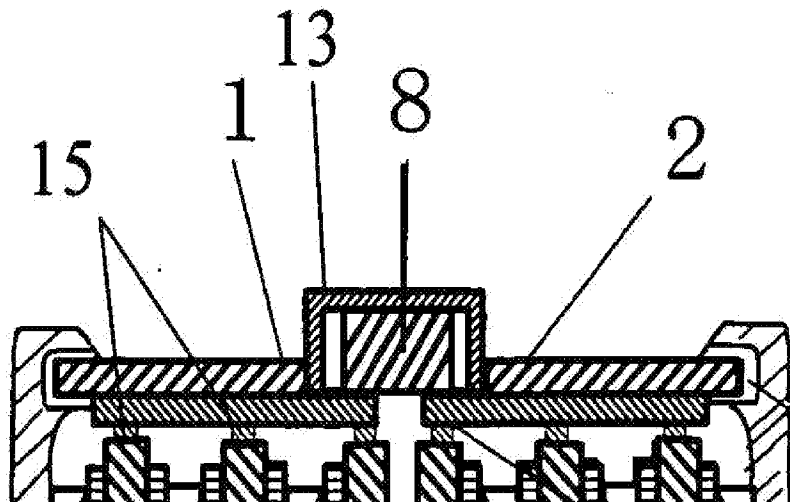
Matsushita Fig. 4a confirms that both positive 15 and negative 16 plate protrusions are known.

1 C. Discussion

2 Matsushita has failed to show that the Examiner erred in rejecting the  
3 claims over Yoshinaka.

4 (1)

5 We first address a concern. In Matsushita Fig. 1a, it is not entirely  
6 clear as to the meaning of numeral 2. As can be seen from the enlarged  
7 portion of Matsushita Fig. 1a reproduced below, it is not clear where the line  
8 from reference numeral 2 ends.

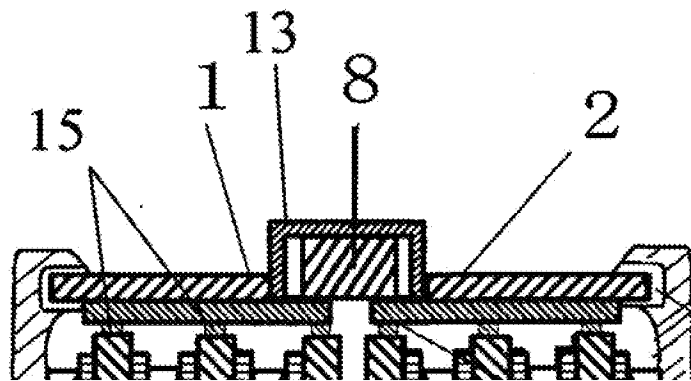


9 Depicted is the top portion of Matsushita Fig. 1a.

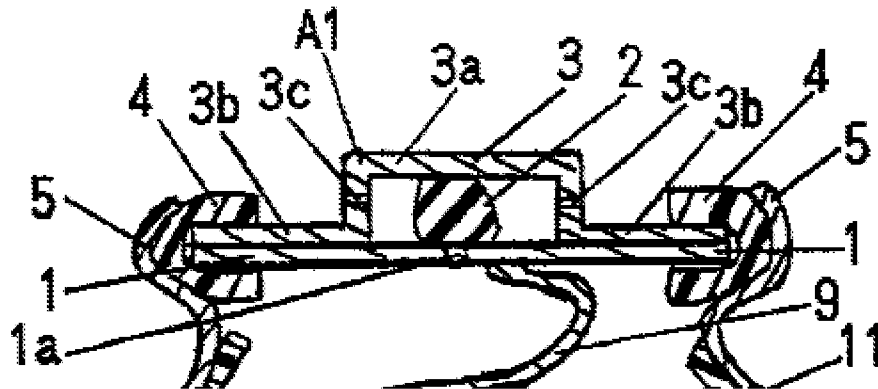
10 As can be seen, the line from 2 to the battery appears to end on the  
11 same element which is shown as current collector element 1. Element 2 is  
12 said to be a doughnut-like sealing plate (specification, page 10:2). In  
13 context, we believe the line to element 2 was intended to indicate the  
14 element with cross-hatching pointing to the upper left hand corner of the  
15 page. Element 1 is the element with cross-hatching pointing to the upper  
16 right hand corner of the page.

(2)

- 1           The similarities and difference between the Matsushita Fig. 1a  
2   embodiment and the Yoshinaka Fig. 1 embodiment become apparent upon a  
3   review of the top portion of both figures—reproduced below.



Depicted is the top portion of Matsushita Fig. 1a.



Depicted is the top portion of Yoshinaka Fig. 1.

1           The elements of the two figures correspond as follows.

Matsushita Fig. 1a	Yoshinaka Fig. 1
Current collector 1	Flange of terminal plate 3b
Cap (unnumbered) with hole 13	Cap 3 with hole 3c
Doughnut-like sealing plate 2 with a center hole (unnumbered)	Conductive filter 1 with center hole 1a

2           As noted earlier, a difference addressed by the Examiner is the two-  
3 piece cap of Matsushita vis-à-vis the one-piece cap/sealing plate of  
4 Yoshinaka.

5           Our first observation is that we are not sure what claim limitation  
6 addresses the two-piece characteristic of the Matsushita invention. Our  
7 second observation is that there may be no difference. Conductive filter 3b  
8 of Yoshinaka is shown in the drawings and described in the specification as  
9 separate from conductive filter 1. Col. 6:63-65. The elements shown in  
10 Matsushita Fig. 1a seem to be arranged in the same manner as the elements  
11 shown in Yoshinaka Fig. 1. Accordingly, it would appear there is no  
12 difference.

13           Assuming that the difference addressed by the Examiner and  
14 Matsushita relates to the unnumbered Matsushita cap with hole 13 and  
15 Matsushita doughnut-like sealing plate 2, we cannot say that the Examiner  
16 erred in finding a two-piece element obvious over a one-piece element. One  
17 skilled in the art would immediately see that the Matsushita two-piece  
18 element functions in precisely the same way as the Yoshinaka one-piece  
19 elements. Insofar as we can tell on this record, no new function results from

1 the Matsushita two-piece element. The number of pieces used to conduct  
2 electricity from the electrode group 22 has not been shown to be significant.  
3 The object is to conduct direct current electricity from the electrode  
4 group 22 through protrusions 15 then through sealing plate 2 and then  
5 through cap (unnumbered). The two-piece element of Matsushita calls to  
6 mind the use of two short extension chords when a long single extension  
7 chord is not available.

8 (3)

9 Another difference, as noted earlier, is the location of the hole. One  
10 skilled in the art would know that, if a hole is needed, the hole can be  
11 located at any convenient part of the cap. The position of the hole does not  
12 render the claimed invention unobvious. Moreover, we note that the hole of  
13 Yoshinaka's conductive filter, corresponding to Matsushita's sealing plate, is  
14 located in the center of the Yoshinaka conductive filter.

15 (4)

16 Yet another difference is said to be the protrusions, elements 15 and  
17 16. Matsushita acknowledges in its prior art Fig 4a, however, that the use of  
18 protrusions is known. It appears that Matsushita is using a known element  
19 for its known purpose.

20 We have not overlooked the statement on page 16:1-2 of the Appeal  
21 Brief to the effect that "[a] protrusion, electrically connecting the positive  
22 plate and the upper metal current collector is not admitted prior art."  
23 Likewise, we have not overlooked similar statements in the Appeal Brief to  
24 the same effect. See, e.g., Appeal Brief, page 10:13-17. But, Fig. 4a is  
25 labeled "PRIOR ART". *In re Nomiya*, 509 F.2d 566, 571 n.5 (CCPA 1975)

1 (it is a basic proposition that a statement by an applicant, whether in the  
2 application in other papers submitted during prosecution, that certain matter  
3 is prior art to him, is an admission that the matter is prior art for all  
4 purposes). According to the specification, Fig 4 (meaning Fig. 4a and  
5 Fig. 4b) describes a "conventional alkaline storage battery." Specification,  
6 page 11:1-2. The specification also states that "Fig. 4 illustrates the structure  
7 of a conventional alkaline storage battery. Specification, page 1:20-21.

8 To the extent that *Nomiya* does not foreclose entirely a possibility that  
9 an applicant may "take back" an admission that a feature initially labeled as  
10 prior art is in fact not prior art, we note the following. There is no cogent  
11 explanation on this record why the Examiner could have erred in treating  
12 Fig. 4 as prior art. While Matsushita discusses a difference associated with  
13 lead 11 of Fig. 4, Matsushita has not explained why protrusions 15, 16 are  
14 not part of a "conventional alkaline storage battery" shown in Fig. 4.  
15 Specification, page 8:13. Moreover, we doubt counsel for Matsushita has  
16 first-hand knowledge of the Fig. 4 prior art device. The record before us  
17 does not include a declaration of person with first-hand knowledge about the  
18 Fig. 4 prior art device.

19 (5)

20 Matsushita first alleges that its arrangement "causes significant  
21 reduction in resistance and eliminates space occupied by a conventional lead  
22 . . . ." Reply Brief, page 4. Matsushita secondly alleges that the "claimed  
23 features allow for a simpler method of assembling the cylindrical alkaline  
24 storage battery of the present invention." *Id.*

1 With respect to the second allegation, the claims are not directed to a  
2 method. It is not apparent how the claimed method is significantly different  
3 from the method for making the prior art alkaline storage battery of  
4 Yoshinaka.

5 With respect to the first allegation, there is no credible evidence in the  
6 record to show that the resistance is significantly different in the Yoshinaka  
7 battery than in the Matsushita battery.

8 Table 1 in the specification (page 15) describes internal resistance and  
9 battery capacity of an exemplary Matsushita embodiment (Battery "A"  
10 (4-5 m $\Omega$  and 1700 mAh)) vis-à-vis a conventional battery (Battery "B"  
11 (7-9 m $\Omega$  and 1500 mAh)). The conventional battery appears to be an  
12 AA-size alkaline storage battery of a conventional structure as illustrated in  
13 Matsushita Fig. 4. Specification, page 15. Unlike the Yoshinaka battery, the  
14 "conventional" battery of Matsushita Fig. 4 does not have a doughnut-like  
15 sealing plate. The comparison of Battery "A" with Battery "B" is not a  
16 comparison of the claimed invention with the closet prior art, *In re Baxter*  
17 *Travenol Labs.*, 952 F.2d 388, 392 (Fed. Cir. 1991), and therefore is not  
18 clear and convincing evidence of an unexpected result, *McClain v.*  
19 *Ortmayer*, 141 U.S. 419, 429 (1891) and *In re Lohr*, 317 F.2d 388, 392  
20 (CCPA 1963).

21 (6)

22 Since we affirm the rejection based on Yoshinaka, we do not find it  
23 necessary to reach the rejection based on Han. We would observe, however,  
24 that the two rejections would appear to stand or fall on the basis of the same  
25 rationale.



1 D. Decision

2 Matsushita has not sustained its burden on appeal of showing that the  
3 Examiner erred in rejecting the claims on appeal as being unpatentable under  
4 Yoshinaka the prior art.

5 On the record before us, Matsushita is not entitled to a patent  
6 containing claims 1-8.

7 Upon consideration of the appeal, and for the reasons given herein,  
8 it is

9 ORDERED that the decision of the Examiner rejecting  
10 claims 1-8 over Yoshinaka is *affirmed*.

11 FURTHER ORDERED that no time period for taking any  
12 subsequent action in connection with this appeal may be extended under  
13 37 C.F.R. § 1.136(a)(1)(iv) (2008).

AFFIRMED

KMF

cc (via First Class mail)

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